

# The Fireworks Factory - From Box Hill to the World

*Kevin Smith*

The 'fireworks factory' was a familiar sight along Windsor Rd, Box Hill for many years. Ten acres of small sheds packed in earth (magazines) concealed the wares of one of the most famous fireworks companies in the world. In these magazines aerial shells, golden fountains, lances and match were manufactured and stored. Unique to Australia the golden fountains were exported to Disneyland USA and used in their nightly fireworks display. Fireworks were also imported from China and Japan and, when these myriads of fireworks were choreographed into displays by Syd Howard, spectators Australia wide experienced a world class display and stood in awe as the sky burst into colour.

The introduction of computerized firing made it possible to fire from the top of city buildings, barges on the harbour and finally the most exciting of all the Sydney Harbour bridge. First fireworks burst from the pylons of the bridge accompanied by a brilliant golden waterfall spanning the length of the bridge and cascading into the water below. Gradually the displays became more and more spectacular culminating in fully digitalized firing synchronized to music introducing the most exciting of all displays – the “Sky Shows”. In 1988 there were nightly shows at Brisbane World Expo for six months and in Sydney on New Year’s Eve the first show that incorporated the arch of the bridge. The picture of this show was featured on the front page of *Time* magazine and televised around the world

I first met Syd Howard in 1981 through my wife who worked at the factory in Box Hill as his office assistant. I was later engaged to build an extension to the detonator shed at the factory. This was my first encounter to the world of fireworks by certainly the most famous fireworks family in Australia, the Howards, but especially to Syd Howard who was renowned world-wide for his fireworks displays. A volatile character he lived and breathed fireworks, a very charismatic man who could hold any audience spellbound recounting a lifetime of experiences doing fireworks displays.

He commenced as a young boy, travelling alone by train to country towns carrying a suitcase packed with fireworks, which he would set up and fire at the local agricultural show. Cleaning up afterwards he would return home by train. When it came to fireworks his imagination knew no bounds and like all gifted persons his mind was always racing well ahead of every pyrotechnic and all who worked for him. If the workers or others could not keep pace with his ideas he could become very volatile!!

Once it was discovered that I held a truck licence I was offered a job of driving the company Mercedes 22/32, truck transporting black powder used in the manufacture of fireworks from the government reserves at Helidon Qld., back to the factory at Box Hill. This powder originated in USA and was brought by ship to the port of Brisbane where it was unloaded then stored in the government magazine. Brisbane was the closest port in Australia which allowed the unloading of explosives.

When I first commenced doing displays for Syd Howard I was the new kid on the block. His leading pyrotechnicians were Alan Bragg, Peter McNamara, Richard Goodacre, Ian Riedel (Qld.), and Des Lawton (Vic). He also had pyrotechnicians in South Australia and the Northern Territory but their names escape me. These men formed an elite team who worked around Australia, New Zealand and New Guinea. I learnt by assisting in firing small displays at country shows and fetes around NSW with Bill Brown and Adam Gilbert.

The show was packed into boxes at the factory and driven to the location in a Hiace van. They were set out by hand in pre-planned order then, as the lights dimmed, we moved around igniting the fireworks with 'port fires'. Sometimes music played in the background but in no way was it

synchronized to the fireworks, this came years later. The show always ended with a finale of colourful



**1986. Luke Worboys poses for a photo on top of the Sydney Harbour Bridge. This was the first time permission was given for fireworks to be fired from the Harbour Bridge.**

**Photo: Luke Worboys.**



**Preparing for the Bicentennial Fireworks. The set piece formwork can be seen at the rear. The mortars have been packed in sand on the barges. The shed to the left is where the pyrotechnicians sat to fire the shells.**

**Photo: Kevin Smith**

3 inch and 4 inch shells fired from a heavy cardboard mortar. The number and size of these shells was governed by the budget of the display. If the organizer wished to acknowledge a sponsor this was often done in a 'set piece' of coloured lances which burnt for three to four minutes.

After two years I obtained my pyrotechnic license from the then Dangerous Goods Dept and was able to fire bigger shells and go solo. In 1985 the company split and all the pyrotechnicians decided to go with Syd, the manufacturing was relocated to Kempsey and the display company to Dural.

To the layman anything to do with fireworks is intriguing but the work that goes on behind the scenes is very far from glamorous, fraught with danger and always hectic. The first really big fireworks display I worked on was in 1986, a display to commemorate the 75th Anniversary of the Royal Australian Navy. What made this show so very special was that for the first time ever, Syd had gained permission to incorporate the Sydney Harbour bridge into the show. This was to be a set piece spanning the eastern side of the bridge. It was an enormous set piece pre-made at the factory and transported to the bridge by truck.

So on 5th November at 4.00am, six of us arrived at the site on the bridge, the barges had already been loaded and were waiting on the harbor below. One traffic lane and the pathway of the bridge were closed to the public enabling us to gain access. Six of us plus two riggers worked for four hours to mount the massive piece in place. Each piece of framework had to be unloaded from the truck, carried across the traffic lane and walk-way over the anti-jumping fence, then passed over the side to the waiting riggers in harness suspended from above the bridge. They hung there for nearly 14 hours lashing the pieces together and connecting up the match to ignite the lances which spelt out the message "NSW SALUTES ROYAL AUSTRALIAN NAVY".

At 1.00pm that afternoon the powers that be decided to open up the walk way and we were engulfed with spectators not only watching us but jockeying for the best position to watch the display that evening. But all was forgotten when the set piece burst into colour and the golden waterfall cascaded down from the bridge. It was topped by the most spectacular of all shells, a 24 inch shell fired from a steel mortar. Manufactured for this was a "giant" shell made especially for Syd by the famous Japanese manufacturer Nakagawa whose son Toshi had arrived earlier to work on the show.

1988 became a very busy year for us workers with the news that not only were we doing every major display in Australia we had also been contracted for six months of nightly displays on the Brisbane River to celebrate the 1988 World Expo.

The bridge was to become an integral part of future displays, a launching pad for magnificent bursts of fireworks. The Australia Day display on January 26th 1988 to celebrate the Bi-Centenary of the first settlement in Australia saw fireworks mounted on both pylons, a waterfall from the walkway and a magnificent burst from the arch.

The following year Syd's dream became a reality when for the first time ever we able to use the arch over the Harbour bridge. This display was a phenomenon, a world first. The Sydney New Year's Eve display became renowned. It was televised around the world and featured on *Time* magazine.

By the early 90's Australia Day Sky shows sponsored by radio stations were being fired in every state. These shows were synchronized to music and digitally fired by computers. Gone were the days of hand firing by port fires with a bit of music playing in the background. Every shell was wired to a firing box needing only to be touched with a probe to set off a burst of shells.

The pressure of these displays was relentless. As Australia Day weekend approached up to ten workers would be flat out making set pieces, packing thousands of fireworks into boxes and loading equipment into containers ready to be transported to the different interstate sites. I would commence with a fully laden truck, drive to Melbourne, unload the fireworks to Des Lawton and his waiting crew for the Melbourne Sky show. Once this unloading was completed I would head off to South Australia to unload fireworks and equipment for Adelaide Sky show. I then worked for seven days with the South Australian crew setting up the display in Kim Bonython Park. Once this show had been fired and we were able to clean up the area all the steel mortars and other equipment had to be repacked into the container and by 1.00am I was on the road driving through the night back to Melbourne with extra equipment for their Sky Show that night.

Each year I travelled to Papua New Guinea to do a display from a barge in Port Moresby harbour. I stayed in the Travelodge motel which was encircled by a high wire fence to protect tourists. Security was very tight. We had security guards 24 hours to keep the "rascals" away from the fireworks. (The "rascals" were tribesman who came down from the hills where they lived in 'cardboard city'.) The majority of males in Papua New Guinea chewed betel nuts, the streets and surrounding area was very unpleasant as a result of them constantly spitting their bright red saliva everywhere. Their mouths were always covered in red dye from the nuts and to increase the flavour they rubbed salt around their lips which eventually rotted their teeth. Few men after the age of 30 had their own teeth.

The last big job I worked on was the display in Hong Kong on 1st July 1997 to mark the British handover of Hong Kong to the Chinese Government. I was one of the sixteen pyrotechnicians to travel to Hong Kong for this show; little did we know what lay ahead of us! The display was to be set up and fired in Victoria Harbour and fired at 9.00pm. Ahead was eight days of sweltering heat and consistent rain.

Normally we would set up on each barge large wooden boxes 8'x3', in these boxes the mortars were placed then packed with sand to stabilize them. Every shell loaded with a detonator was placed into the mortars. The wire from the detonator was then attached to rails which hung on the side of the box. These wires then formed into a cable which lead back to the firing boxes located in a container on the barge. We arrived to find that tons of sand had already been dumped on the barges instead of the wharves and had to be removed before we could set up.

The consistent rain made it necessary for the barges to be covered with canvas to protect the fireworks making working very difficult. The language barrier was always a problem. There were 1700 shells to be fired from each of the eight barges as well as a mixture of shells from China and Japan. The match we took with us proved invaluable in the wet weather as it remained waterproof, so we once again fired a spectacular show, heaved a sigh of relief and next day got on a plane to fly back home.

Unfortunately during the next big display at Darling Harbour I was injured. I checked a shell that had not fired correctly and it hit me on the side of my head. I still bear the scar! However I realized that it could have been worse. Every pyrotechnician bears the responsibility of the safety of thousands of spectators and their safety is paramount.

Fireworks have given me fifteen years of wonderful experience. At every big celebration around Australia and the Pacific the fireworks operators are there. It was hard work and long hours but it provided wonderful memories.